

REMARKS

Claims 16 and 18 to 35 are pending in the present application.

In view of the following remarks, it is respectfully submitted that the pending claims are allowable, and reconsideration is respectfully requested.

Claims 16 and 27 to 29 were objected to for minor informalities.

Claims 16 and 27 to 29 were rewritten to recite “the order of processes within the task” to better clarify the subject matter. Withdrawal of the objections is therefore respectfully requested.

Claims 30 to 32 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

Claims 30 to 32 have been corrected, as suggested. Withdrawal of the indefiniteness rejections is therefore respectfully requested.

Claims 16, 18 to 23, 27 to 29, and 33 to 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Debugging Protocol for Remote Cross Development Environment* to Seungwoo et al. (“Seungwoo”) in view of *The REAR Framework for Emulation and Analysis of Embedded hard Real-Time System* to Petters et al. (“Petters”).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of

obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 16 is related to a simulation system for computer-implemented simulation and verification of a *control system under development*. In this regard, the specification of the present application (in view of which the claims are interpreted) makes clear that the “under development” of the claimed subject matter is to a system that is *presently running* (i.e., already being performed) and need not be stopped to run a new simulation. (See Specification, page 11, line 30, to page 12, line 7). It is respectfully submitted that the combination of Seungwoo and Petters does not disclose the above highlighted feature.

The Final Office Action concedes that Seungwoo does not disclose this feature, but it relies on the Petters reference to supposedly address the critical deficiency. As to Section 2.2 of the Petters reference, however, the Final Office Action does not explain -- nor is it readily apparent -- how the cited section discloses this feature. Indeed, any review of the entire Petters reference makes plain that a verification of a *control system under development* -- as provided for in the context of claimed subject matter -- is not even discussed.

Instead, Petters merely discusses a rapid prototyping framework in which (1) a rapid prototype is provided, and (2) “delivers the proof that the embedded system will met all timing requirements, and verifies that the timing requirements have been modeled correctly.” (Petters, page 2, Section 1.) Nowhere does Petters disclose or suggest the feature of being able to verify a control system by, for example, adding additional features while it is still running. Accordingly, there is no disclosure of verification of a control system *under development*, as provided for in the context of the claimed subject matter.

Also, it is axiomatic that the terms in a claim are to be understood in view of the specification. (See *In re Weiss*, 26 U.S.P.Q.2d 1885, 1887 (Fed. Cir. 1993) (when interpreting a claim term or phrase, one must “look to the specification for the meaning ascribed to that term”; Board reversed) (unpublished decision); *In re Okuzawa*, 190 U.S.P.Q. 464, 466 (C.C.P.A. 1976) (“claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification”; Board reversed; emphasis in original) (citing *In re Royka*, 180 U.S.P.Q. 580, 582-83 (C.C.P.A. 1974) (claims are “not to be read in a

vacuum” and “their terms still have to be given the meaning called for by the specification of which they form a part”; Board reversed; emphasis in original); and *In re Rohrbacher*, 128 U.S.P.Q. 117, 119 (C.C.P.A. 1960) (an “applicant is his own lexicographer and words used in his claims are to be interpreted in the sense in which they are used in the specification”; Board reversed)).

As further regards claim 16, it is *reconfigured by the host of the host-target architecture* via a first application programming interface associated with the real-time operating system of the target, so as to *dynamically reconfigure* at least one of the following real-time-properties of the real time operation system, including: a kind of task, including at least one of a *periodic task, an ISR task, a task invoked by software, and a task occurring upon application mode initialization, a task priority and a scheduling mode*, which includes one of a cooperative mode, a pre-emptive mode, and a non-pre-emptivable mode, a *task period and a task offset*, a task deadline and a *maximum number of activations*, a content of the task, the content including processes within the task and the *order of the processes within the task*, and application modes of the operating system, resources, alarms, and counters, I/O configuration and network management, and events and messages for communication and for an association thereof.

It is respectfully submitted that the combination of Seungwoo and Petters does not disclose the above highlighted features. Although the Final Office Action conclusorily asserts that Section 2.2 of Petters discloses all these features, the cited section does not support this contention. Indeed, the Final Office Action does not explain how each of the above identified features are disclosed by the Petters reference, since the Final Office Action merely recites the claim language and then conclusorily asserts that the entire Section 2.2 of Petters somehow corresponds to all these claim features. To the extent this rejection is maintained, Applicants therefore respectfully request a proper explanation, as required by the M.P.E.P. and the Office.

Accordingly, claim 16, is allowable, as are its dependent claims 18 to 23 and 33 to 35.

Claims 27, 28, and 29 have features similar to those of claim 16, and they are therefore allowable for essentially the same reasons.

Claims 24 to 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Seungwoo reference in view of the Petters reference and in further view of U.S. Patent No. 5,991,533 to Sano et al., ("Sano").

Claims 24 to 26 depend from claim 16 and are therefore allowable for at least the same reasons since the Sano reference does not cure -- and is not asserted to cure -- the critical deficiencies of the Seungwoo and the Petters references.

Withdrawal of the obviousness rejections for claims 24 to 26 is therefore respectfully requested.

Claims 30 to 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Seungwoo reference in view of the Petters reference and in further view of U.S. Publication No. 2004/0107331 to Baxter ("Baxter").

Claims 30 to 32 ultimately depend from claim 16 and are therefore allowable for at least the same reasons since the Baxter reference does not cure -- and is not asserted to cure -- the critical deficiencies of the Seungwoo and the Petters references.

Withdrawal of the obviousness rejections for claims 30 to 32 is therefore respectfully requested.

As further regards all of the obviousness rejections, any Official Notice is respectfully traversed to the extent that it is maintained and it is requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 103 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

It is therefore respectfully requested that the obviousness rejections be withdrawn.

Accordingly, claims 16 and 18 to 35 are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all of the pending and considered claims are allowable. It is therefore respectfully requested that the rejections and objections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

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Respectfully submitted,

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